

**WHAT IS CLAIMED IS:**

1. A coordinate positioning method, which is applied in a thin film positioning device for detecting a coordinate value of a contact point under an environment of periodic noises, comprising the steps of:

5 obtaining a first sampling value of the contact point at a first time point;

obtaining a second sampling value of the contact point at a second time point, wherein the interval between the first time point and the second time point is roughly a half of the period of the periodic noise;

10 determining if the absolute value of the difference between the first sampling value and the second sampling value is smaller than a first threshold value or not: if not, neglect this contact point and end the process of this method;

15 obtain a third sampling value of the contact point at a third time point, wherein the interval between the third time point and the first time point is roughly a multiple of the period of the periodic noise;

determining if the absolute value of the difference between the first sampling value and the third sampling value is smaller than a second threshold value or not: if not, neglect this contact point and end the process of this method;

use the average value of the first sampling value and the second sampling value to obtain the coordinate of the contact point.

2. The positioning method according to claim 1, wherein the first threshold value is larger than the second threshold value.

5 3. A coordinate positioning method, which is applied in a thin film positioning device for detecting a coordinate value of a contact point under an environment of periodic noises, comprising the steps of:

obtaining a first sampling value of the contact point at a first time point

10 obtaining a second sampling value of the contact point at a second time point;

determining if the absolute value of the difference between the first sampling value and the second sampling value is smaller than a first threshold value or not: if not, neglect this contact point and end the process of this method;

15 obtain a third sampling value of the contact point at a third time point;

determining if the absolute value of the difference between the first sampling value and the third sampling value is smaller than a second threshold value or not: if not, neglect this contact point and end the process of this method;

use the average value of the first sampling value and the second sampling value to obtain the coordinate of the contact point.

4. The positioning method according to claim 3, wherein the first threshold value is larger than the second threshold value.

5 5. The positioning method according to claim 3, wherein the interval between the first time point and the second time point is roughly a half of the period of the periodic noise.

6. The positioning method according to claim 3, wherein the interval between the third time point and the first time point is roughly a multiple of the  
10 period of the periodic noise.

7. A coordinate positioning device for detecting a coordinate value of a contact point under an environment of periodic noise, comprising:

a thin film X which has a first X-end and a second X-end

a thin film Y which has a first Y-end and a second Y-end;

15 a first switch Y coupled to the first Y-end and a ground end;

a second switch Y coupled to the second Y-end and a power source;

a first switch X coupled to the first X-end and the ground end;

a second switch X coupled to the second X-end and the power source;

of which, if a sampling point is to be sampled by the positioning device, the sampling point is the first X-end, the second X-end, the first Y-end or the second Y-end; first of all, a first sampling value of the sampling point is  
5 obtained at a first time point while a second sampling value of the sampling point is obtained at a second time point, wherein the interval between the first time point and the second time point is roughly a half of the period of the periodic noise;

secondly, determine if the absolute value of the difference between the  
10 first sampling value and the second sampling value is smaller than a first threshold value or not: if not, neglect the contact point;

obtain a third sampling value of the sampling point at a third time point, wherein the interval between the third time point and the first time point is roughly a multiple of the period of the periodic noise;

15 next, determining if the absolute value of the difference between the first sampling value and the third sampling value is smaller than a second threshold value or not: if not, neglect the contact point;

lastly, the positioning device uses the average value of the first  
sampling value and the second sampling value to obtain the coordinate value  
20 of the contact point.

8. The positioning method according to claim 7, wherein the first threshold value is larger than the second threshold value.

9. The positioning method according to claim 7, wherein the thin film X and the thin film Y are plane resistances.

5 10. The positioning method according to claim 7, wherein the first switch Y, the second switch Y, the first switch X, and the second switch X are transistors.

11. The positioning method according to claim 7, wherein when detecting an X-coordinate of the contact point, the thin film positioning device connects  
10 the first switch Y and the second switch Y, then chooses a sampling point at the first X-end or at the second X-end to obtain the X-coordinate of the contact point accordingly.

12. The positioning method according to claim 7, wherein when detecting an Y-coordinate of the contact point, the thin film positioning device connects  
15 the first switch X and the second switch X, then chooses a sampling point at the first Y-end or at the second Y-end to obtain the Y-coordinate of the contact point accordingly.

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